STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
GA.	STP00-00MS-00(001)	8	239

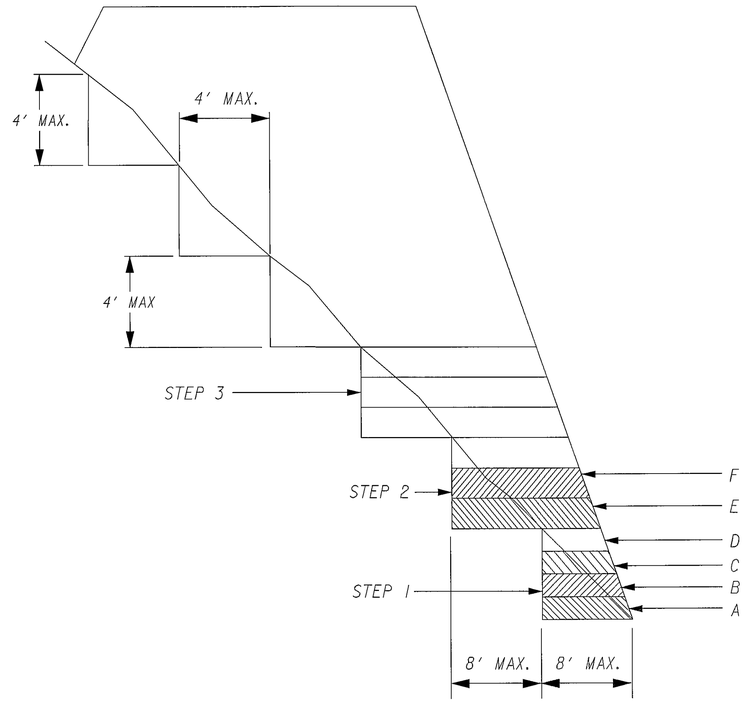
PIPE CULVERT MATERIAL ALTERNATES
FOR PIEDMONT/BLUE RIDGE REGION

TYPE OF PIPE INSTALLATION			CONCRETE	CORRUGATED STEEL AASHTO M-36		CORRUGATED ALUMINUM AASHTO M-196	PLASTIC			
				ALUMINUM COATED (TYPE 2) CORR. STEEL	PLAIN ZINC COATED	PLAIN UNCOATED ALUMINUM	CORR. POLY-ETHYLENE AASHTO M-252	CORR POLY-ETHYLENE SMOOTHED LINED AASHTO M-294 TYPE "S"	POLY VINYL CHLORIDE (PVC) PROFILE WALL AASHTO M-304	POLY VINYL CHLORIDE (PVC) CORRUGATED SMOOTH INTERIOR ASTM F-949
STORM DRAIN	LONGITUDINAL INTERSTATE AND TRAVEL BEARING		X							
	LONGITUDINAL NON-INTERSTATE AND NON-TRAVEL BEARING		X	X		X		X	X	X
	CROSS DRAIN	ADT < 250	X	X	X	X		X	X	X
		GRADE ≤ 10% 250 < ADT < 1500	X	X*		X				X
		ADT > 1500	X							
		GRADE > 10% ADT < 250		X	X	X		X	X	X
		GRADE > 10% ADT > 250				X				X
SIDE DRAIN			X	X	X	X		X	X	X
PERMANENT SLOPE DRAIN				X	X	X		X	X	X
PERFORATED UNDERDRAIN				X	X	X	X	X	X	X

* THIS PIPE CAN BE USED IF THE ADDITION OF TYPE "B" COATING (AASHTO M-190, HALF BITUNINOUS COATED WITH PAVED INVERT) IS UTILIZED.

NOTES.

1. ALLOWABLE MATERIALS ARE INDICATED BY AN "X".
2. STRUCTURAL REQUIREMENTS OF STORM DRAIN PIPE WILL BE IN ACCORDANCE WITH GEORGIA STANDARD 1030-D OR 1030-P, WHICHEVER IS APPLICABLE, AND THE STANDARD SPECIFICATIONS.
3. GRADED AGGREGATE BACKFILL SHALL BE USED IN CROSS DRAIN APPLICATIONS FOR ALL PLASTIC PIPES (AASHTO M-294, HDPE PIPE, AASHTO M-304, PVC PIPE, ASTM F-949 PIPE) REVISED 10-04-05
4. TEMPORARY PIPE CAN BE CMP, PLASTIC OR CONCRETE
5. USE THE ALLOWABLE PIPE CHART UNLESS OTHERWISE NOTED ON THE PLANS.
6. THE CONTRACTOR SHALL PROVIDE ADDITIONAL STORM SEWER CAPACITY CALCULATIONS IF A PIPE MATERIAL OTHER THAN CONCRETE IS SELECTED.



BENCHING DETAIL

Revised 9/29/08 4.5.28 NO SCALE

1 WHERE THE EMBANKMENT IS TO BE PLACED ON A HILLSIDE OR ANOTHER EXISTING EMBANKMENT HAVING A SLOPE OF 3 TO 1 OR STEEPER THE FOUNDATION MUST BE BENCHED WHILE THE EMBANKMENT IS BEING MADE (SEE DIAGRAM AT LEFT)

2 THE DIAGRAM SHOWS THAT BEFORE LAYER "A" IS PLACED THE FIRST STEP IS TO (1) CUT INTO THE SLOPE A MAXIMUM DISTANCE OF ABOUT 8 FEET (ABOUT¾ THE WIDTH OF THE TYPICAL D-8 BULDOZER BLADE) SUCCESSIVE LAYERS B, C, AND D ARE THEN PLACED BEFORE LAYER "E" IS PLACED. THE SECOND STEP IS CUT 8 FEET INTO THE SLOPE AND SUCCESSIVE LAYERS ARE AGAIN PLACED IF IT IS ANTICIPATED THAT THE VERTICAL PART OF THE STEP WILL EXCEED 4 FEET IF A 8 FEET HORIZONTAL CUT IS MADE. THEN THE ACTUAL CUT STOPS WHEN THE VERTICAL PART REACHES A MAXIMUM OF 4 FEET ALLOWING THE HORIZONTAL DISTANCE TO VARY

3 THE PROCESS OF BENCHING IS CONSIDERED INCIDENTAL TO THE ITEM OF UNCLASSIFIED EXCAVATION AND BORROW OR GRADING COMPLETE IN CONSTRUCTION OF THE EBANKMENT AND NO ADDITIONAL MEASUREMENT OF QUANTITY OR PAYMENT WILL BE MADE FOR BENCHING

DRAWING NO. 04-002

DATE	REVISIONS	DATE	REVISIONS

GEORGIA DEPARTMENT OF TRANSPORTATION
GENERAL NOTES